

I Claim:

1. A method for repairing a foot of a cast stator vane segment, the method comprising the steps of:

5 removing a portion of a foot from a cast stator vane segment; and  
securing a replacement foot section onto the cast stator vane segment using an electron beam weld

10 2. The method of claim 1, including the additional step of securing the replacement foot section onto the cast stator vane segment by tack welding prior to securing the replacement foot using electron beam welding.

15 3. The method of claim 1, including the additional step of heat treating the replacement foot section and cast stator vane segment.

4. The method of claim 1, further comprising the step of machining the replacement foot section to a suitable shape.

20 5. The method of claim 1, wherein the cast stator vane segment is located in a compressor section of an engine.

6. The method of claim 1, wherein the cast stator vane segment is located in a high pressure compressor section of an engine.

25 7. The method of claim 6, wherein the cast stator vane segment is a later stage cast stator vane segment.

8. A method for repairing an inaccessible area of an article, comprising the steps of:

removing a section of an article located in an inaccessible area; and  
securing a replacement section to the article.

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9. The method of claim 8, wherein the securing step comprises electron beam welding.

10. The method of claim 8, including the additional step of tack welding the replacement section onto the article prior to the securing step.

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11. The method of claim 8, including the additional step of heat treating the replacement section and the article.

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12. The method of claim 8, further comprising the step of machining the replacement section to a suitable shape.

13. The method of claim 8, wherein the article is a gas turbine engine component.

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14. The method of claim 13, wherein the gas turbine engine component is a vane segment.

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15. The method of claim 14, wherein the vane segment includes an inner platform having a foot, and the inaccessible area is the foot.

16. The method of claim 8, wherein the article is a cast article.

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